

ARALDITE® 2048 A

Version 1.0 Revision Date: 28.08.2019 SDS Number: 400001010043 Date of last issue: -
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Print Date 04.09.2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ARALDITE® 2048 A

Manufacturer or supplier's details

Company : Huntsman Advanced Materials (Singapore) Pte Ltd.

Address : 150 Beach Road, #29-00 Gateway East
189720
Singapore

Telephone : +65 6297 3363

Telefax : +65 6295 2933

Company : Distributor: Rebain International (Aust) Pty Ltd

Address : 53-55 Rodeo Drive
Dandenong South,
Victoria 3175
Australia

Telephone : +61 3 9706 9400

Telefax : +61 3 9792 0768

E-mail address : Global_Product_EHS_AdMat@huntsman.com

Emergency telephone number : EUROPE: +32 35 75 1234
France ORFILA: +33(0)145425959
ASIA: +65 6336-6011
China: +86 20 39377888
+86 532 83889090
India: + 91 22 42 87 5333
Australia: 1800 786 152
New Zealand: 0800 767 437
USA: +1/800/424.9300**Recommended use of the chemical and restrictions on use**

Recommended use : Adhesives

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids : Category 2

Serious eye damage/eye
irritation : Category 1

Skin sensitisation : Category 1

Specific target organ toxicity -
single exposure : Category 3 (Respiratory system)

ARALDITE® 2048 A

Version 1.0	Revision Date: 28.08.2019	SDS Number: 400001010043	Date of last issue: - Date of first issue: 28.08.2019
----------------	------------------------------	-----------------------------	--

Print Date 04.09.2019

Short-term (acute) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H402 Harmful to aquatic life.

Precautionary statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
methyl methacrylate	80-62-6	>= 30 - < 60
methacrylic acid	79-41-4	>= 3 - < 5
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate	52628-03-2	>= 1 - < 3
2,2'-[(4-methylphenyl)imino]bisethanol	3077-12-1	>= 1 - < 3
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	< 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Treat symptomatically.
Get medical attention if symptoms occur.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : None known.

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
- Hazchem Code : 3YE

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Refer to protective measures listed in sections 7 and 8.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling : Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Conditions for safe storage : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Keep in properly labelled containers.

Materials to avoid : Reducing agents
Strong oxidizing agents
Heavy metal salts
For incompatible materials please refer to Section 10 of this SDS.

Recommended storage temperature : 2 - 8 °C

Further information on storage stability : Stable under normal conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type	Control	Basis
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ARALDITE® 2048 A

Version 1.0 Revision Date: 28.08.2019 SDS Number: 400001010043 Date of last issue: -
 Date of first issue: 28.08.2019

Print Date 04.09.2019

		(Form of exposure)	parameters / Permissible concentration	
methyl methacrylate	80-62-6	TWA	50 ppm 208 mg/m3	AU OEL
Further information: Sensitiser				
		STEL	100 ppm 416 mg/m3	AU OEL
Further information: Sensitiser				
methacrylic acid	79-41-4	TWA	20 ppm 70 mg/m3	AU OEL

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
 Refer to Australian/New Zealand Standard AS/NZS 1715 and AS/NZS 1716 for guidance on selection and use of respiratory devices.

Hand protection
 Material

: butyl-rubber

Ethyl Vinyl Alcohol Laminate (EVAL)

Break through time

: > 8 h

Nitrile rubber
 10 - 480 min

Remarks

: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
 The suitability for a specific workplace should be discussed with the producers of the protective gloves.
 Refer to Australian/New Zealand Standard AS/NZS 2161.1: 2000 for guidance on selection and use of protective gloves.

Eye protection

: Eye wash bottle with pure water
 Tightly fitting safety goggles
 Wear face-shield and protective suit for abnormal processing problems.
 Refer to Australian/New Zealand Standard AS/NZS 1337:1992 for guidance on selection and use of protective eyewear.

Skin and body protection

: Impervious clothing
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : paste

Colour : white

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Odour	:	acrylic-like
Odour Threshold	:	No data is available on the product itself.
pH	:	No data is available on the product itself.
Freezing point	:	No data is available on the product itself.
Melting point	:	No data is available on the product itself.
Boiling point	:	> 100 °C
Flash point	:	10 °C Method: closed cup
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Flammability (liquids)	:	No data is available on the product itself.
Upper explosion limit / Upper flammability limit	:	No data is available on the product itself.
Lower explosion limit / Lower flammability limit	:	No data is available on the product itself.
Vapour pressure	:	No data is available on the product itself.
Relative vapour density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	1.02 g/cm ³ (20 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.
Thermal decomposition	:	No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.
Viscosity		
Viscosity, dynamic	:	30,000 - 70,000 mPa.s (25 °C)
Explosive properties	:	No data is available on the product itself.

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Oxidizing properties : No data is available on the product itself.

Particle size : No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : None known.

Hazardous decomposition products : carbon dioxide
carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : No data is available on the product itself.

Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : > 2,000 mg/kg
Method: Calculation method

Acute inhalation toxicity - Product : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity - Product : Acute toxicity estimate : > 2,000 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation**Product:**

Species: Rabbit
Assessment: No skin irritation
Result: No skin irritation

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation**Product:**

Remarks: May cause irreversible eye damage.

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Respiratory or skin sensitisation**Product:**

Remarks: Causes sensitisation.

Assessment: No data available

Chronic toxicity**Germ cell mutagenicity****Components:**

methyl methacrylate:

Genotoxicity in vitro

: Test Type: Microbial mutagenesis assay (Ames test)
Test system: Salmonella typhimurium
Method: OECD Test Guideline 471
Result: negative

methacrylic acid:

Genotoxicity in vitro

: Concentration: 33 - 4000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:

Genotoxicity in vitro

: Test Type: Ames test
Test system: Salmonella typhimurium and E. coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Concentration: 1000, 1500, 2000, 3000, 4000 a
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Concentration: 5, 10, 20, 40, 60, 80, 100 µg/
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

2,4,6-tris(dimethylaminomethyl)phenol:

Genotoxicity in vitro

: Concentration: 5000 ug/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Concentration: 2500 ug/plate

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Components:

methacrylic acid:

Genotoxicity in vivo

: Cell type: Somatic
Application Route: Inhalation
Exposure time: 2 h
Dose: 100 - 1000 ppm
Method: OECD Test Guideline 475
Result: Not classified due to inconclusive data.

Application Route: Inhalation
Exposure time: 6 h
Dose: 100 - 9000 ppm
Method: OECD Test Guideline 478
Result: negative

Carcinogenicity**Components:**

methyl methacrylate:

Species: Rat, male and female

Application Route: Oral

Exposure time: 2 Years

Dose: 6, 60, 2000 ppm

Frequency of Treatment: once daily

NOAEL: 90.3 mg/kg bw/day

Result: negative

methacrylic acid:

Species: Rat, male and female

Application Route: Inhalation

Exposure time: 24 month(s)

Dose: 250 - 1000 ppm

Frequency of Treatment: 5 daily

Method: OECD Test Guideline 453

Result: negative

Species: Rat, male and female

Application Route: Oral

Exposure time: 24 month(s)

Dose: 12 - 3300 ppm

Frequency of Treatment: 7 daily

Result: negative

Carcinogenicity - Assessment : No data available

ARALDITE® 2048 A

Version 1.0 Revision Date: 28.08.2019 SDS Number: 400001010043 Date of last issue: -
Date of first issue: 28.08.2019

Print Date 04.09.2019

Reproductive toxicity**Components:**

methacrylic acid:
Effects on fertility

: Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 0, 50, 150, 400 milligram per kilogram
Fertility: No observed adverse effect level F1: 400 mg/kg body weight
Symptoms: Reduced body weight
Method: OPPTS 870.3800

2,4,6-tris(dimethylaminomethyl)phenol:

Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 422
Remarks: No significant adverse effects were reported

Components:

methyl methacrylate:
Effects on foetal
development

: Species: Rat
Application Route: Inhalation
Dose: 99, 304, 1178 ppm
Teratogenicity: No observed adverse effect concentration F1:
8,300 mg/m³
Embryo-foetal toxicity: No observed adverse effect
concentration F1: 8,300 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects

methacrylic acid:

Test Type: Pre-natal
Species: Rat, male and female
Application Route: Inhalation
Dose: 200, 300 ppm
Embryo-foetal toxicity: No observed adverse effect
concentration F1: 300 ppm
Method: OECD Test Guideline 414
Result: No effects on fertility and early embryonic
development were detected.

Test Type: Pre-natal
Species: Rabbit, male and female
Application Route: Oral
Dose: 50, 150, 450 milligram per kilogram
General Toxicity Maternal: No observed adverse effect level:
50 mg/kg body weight
Developmental Toxicity: No observed adverse effect level F1:
450 mg/kg body weight
Result: No effects on fertility and early embryonic
development were detected.

Reproductive toxicity -
Assessment : No data available

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

STOT - single exposure**Components:**

methyl methacrylate:
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

methacrylic acid:
Target Organs: Respiratory system
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity**Components:**

methyl methacrylate:
Species: Rat, male and female
NOAEL: 124.1 mg/kg
Application Route: oral (drinking water)
Exposure time: 2 years
Number of exposures: daily
Dose: 6, 60, 2000 ppm

methacrylic acid:
Species: Rat, male and female
NOEC: 500 ppm
Test atmosphere: vapour
Exposure time: 2 yr
Number of exposures: 5 d
Method: OECD Test Guideline 453

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:
Species: Rat, male and female
NOEL: 1000 mg/kg
Application Route: Oral
Exposure time: 28 d
Dose: 0, 100, 300, or 1000 MKD
Method: OECD Test Guideline 407
GLP: yes

2,4,6-tris(dimethylaminomethyl)phenol:
Species: Rat, male and female
NOEL: 15 mg/kg
Application Route: Ingestion
Exposure time: 1,032 h
Number of exposures: 7 d
Method: Subacute toxicity

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information**Product:**

Remarks: Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:**

methyl methacrylate:

Toxicity to fish

: LC50: 191 mg/l
Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): > 79 mg/l

Exposure time: 96 h

Test Type: flow-through test

Method: Fish Early-life Stage Toxicity Test

methacrylic acid:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 85 mg/l
Exposure time: 96 h
Test Type: flow-through test

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Test substance: Fresh water
Method: Fish Acute Toxicity Test
Remarks: Toxic to aquatic organisms.

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 112 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

2,4,6-tris(dimethylaminomethyl)phenol:
Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 175 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water

Components:

methyl methacrylate:
Toxicity to daphnia and other : EC50: 69 mg/l
aquatic invertebrates Exposure time: 48 h

methacrylic acid:
Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 130 mg/l
aquatic invertebrates Exposure time: 48 h
Test Type: flow-through test
Test substance: Fresh water
Method: Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:
Toxicity to daphnia and other : LC50 (Daphnia magna (Water flea)): 68 mg/l
aquatic invertebrates Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

2,4,6-tris(dimethylaminomethyl)phenol:
Toxicity to daphnia and other : LC50 (Palaeomonetes vulgaris (Grass shrimp)): 718 mg/l
aquatic invertebrates End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Test substance: Marine water

Components:

methyl methacrylate:
Toxicity to algae/aquatic : EC50: > 110 mg/l
plants Exposure time: 72 h

methacrylic acid:
Toxicity to algae/aquatic : ErC50 (Selenastrum capricornutum (green algae)): 45 mg/l
plants Exposure time: 72 h
Test Type: static test
Test substance: Fresh water

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Method: OECD Test Guideline 201

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): > 120 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (algae)): > 30 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

2,4,6-tris(dimethylaminomethyl)phenol:

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 84 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 6.25 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : No data available

Components:

methacrylic acid:

Toxicity to fish (Chronic toxicity) : NOEC (Brachydanio rerio (zebrafish)): 10 mg/l
Exposure time: 35 d
Test Type: flow-through test
Test substance: Fresh water
Method: OECD Test Guideline 210

Components:

methyl methacrylate:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 37 mg/l
Exposure time: 21 d
Test Type: flow-through test
Method: OECD Test Guideline 211

methacrylic acid:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 53 mg/l
Exposure time: 21 d
Test Type: flow-through test
Test substance: Fresh water
Method: OECD Test Guideline 211

ARALDITE® 2048 A

Version 1.0	Revision Date: 28.08.2019	SDS Number: 400001010043	Date of last issue: - Date of first issue: 28.08.2019
----------------	------------------------------	-----------------------------	--

Print Date 04.09.2019

M-Factor (Chronic aquatic toxicity) : No data available

Components:

methacrylic acid:

Toxicity to microorganisms : EC50 (Pseudomonas putida): 270 mg/l
Exposure time: 17 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38 412 Part 8

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Persistence and degradability**Components:**

methyl methacrylate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d

methacrylic acid:

Biodegradability : Inoculum: activated sludge
Concentration: 3 mg/l
Result: Readily biodegradable.
Biodegradation: 86 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 54.6 mg/l
Result: Readily biodegradable.
Biodegradation: 93.1 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

GLP: yes

2,4,6-tris(dimethylaminomethyl)phenol:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, non-adapted
Concentration: 2 mg/l
Result: Not biodegradable
Biodegradation: 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Biochemical Oxygen Demand (BOD) : No data available

Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential**Components:**

methyl methacrylate:

Bioaccumulation : Bioconcentration factor (BCF): 3

Components:

methyl methacrylate:

Partition coefficient: n-octanol/water : log Pow: 1.38

methacrylic acid:

Partition coefficient: n-octanol/water : log Pow: 0.93 (22 °C)
pH: 2.2

2,4,6-tris(dimethylaminomethyl)phenol:

Partition coefficient: n-octanol/water : Pow: ≥ 0.219 (21.5 °C)
log Pow: -0.66 (21.5 °C)

ARALDITE® 2048 A

Version 1.0	Revision Date: 28.08.2019	SDS Number: 400001010043	Date of last issue: - Date of first issue: 28.08.2019
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Print Date 04.09.2019

Method: OPPTS 830.7550

Mobility in soil

Mobility : No data available

Distribution among environmental compartments : No data available

Stability in soil : No data available

Other adverse effects

Environmental fate and pathways : No data available

Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

Hazardous to the ozone layer

Ozone-Depletion Potential Not applicable

Additional ecological information - Product : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

Global warming potential (GWP) : No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of contents/ container to an approved waste disposal plant.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Do not re-use empty containers.

Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA**

UN/ID No.	: UN 1247
Proper shipping name	: Methyl methacrylate monomer, stabilized
Class	: 3
Packing group	: II
Labels	: Class 3 - Flammable liquids
Packing instruction (cargo aircraft)	: 364
Packing instruction (passenger aircraft)	: 353

IMDG

UN number	: UN 1247
Proper shipping name	: METHYL METHACRYLATE MONOMER, STABILIZED
Class	: 3
Packing group	: II
Labels	: 3
EmS Code	: F-E, S-D
Marine pollutant	: no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**ADG**

UN number	: UN 1247
Proper shipping name	: METHYL METHACRYLATE MONOMER, STABILIZED
Class	: 3
Packing group	: II
Labels	: 3
Hazchem Code	: 3YE

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture**

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

Print Date 04.09.2019

Standard for the Uniform : Schedule 6
Scheduling of Medicines and
Poisons

Australia Work Health and Safety Regulations - : There is no applicable prohibition or
Schedule 10 Prohibited carcinogens, restricted notification/licensing requirements,
carcinogens and restricted hazardous chemicals. including for carcinogens under
Commonwealth, State or Territory
legislation.

The components of this product are reported in the following inventories:

CH INV : The formulation contains substances listed on the Swiss
Inventory

DSL : This product contains one or several components listed in the
Canadian NDSL.

AICS : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan),
ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA
(USA)

SECTION 16. OTHER INFORMATION

Revision Date : 28.08.2019
Date format : dd.mm.yyyy

AU OEL : Australia. Workplace Exposure Standards for Airborne
Contaminants.

AU OEL / TWA : Exposure standard - time weighted average
AU OEL / STEL : Exposure standard - short term exposure limit

The information and recommendations in this publication are to the best of our knowledge,
information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE
CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

ARALDITE® 2048 A

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.08.2019	400001010043	Date of first issue: 28.08.2019

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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